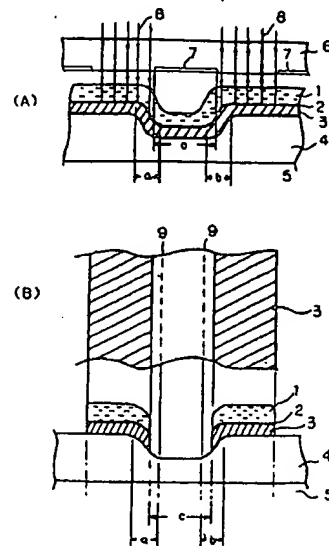


(54) MANUFACTURE OF SEMICONDUCTOR DEVICE

(11) 5-175116 (A) (43) 13.7.1993 (19) JP
 (21) Appl. No. 3-342685 (22) 25.12.1991
 (71) NEC KANSAI LTD (72) SHIGEO MIZOGAMI
 (51) Int. Cl.⁵. H01L21/027, H01L21/28, H01L21/3205

PURPOSE: To prevent an abnormal approach, a bridge connection between adjacent electrodes, wirings due to an exposure defect on a stepped part of a surface of a wafer in the step of forming aluminum electrodes, wirings by photoetching a semiconductor device.

CONSTITUTION: After a surface of an aluminum film 3 formed on an entire surface of a wafer is coated with resin 2 being black or having low light reflectivity, it is photoetched in the same manner as prior art, and aluminum electrodes, wirings are formed.



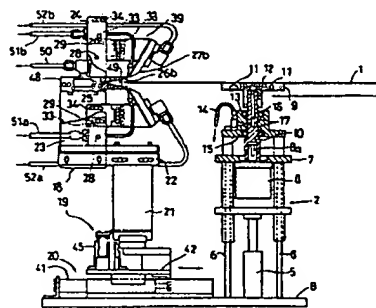
1: photoresist film

(54) CLEANER FOR EDGE OF SUBSTRATE

(11) 5-175117 (A) (43) 13.7.1993 (19) JP
 (21) Appl. No. 3-357131 (22) 24.12.1991
 (71) DAINIPPON SCREEN MFG CO LTD (72) YOSHIO MATSUMURA(2)
 (51) Int. Cl.⁵. H01L21/027, H01L21/304

PURPOSE: To remove unnecessary thin films on the edge of a rectangular substrate effectively while dissolving them, by providing solvent nozzles for dissolving the unnecessary thin films while discharging a solvent, and by providing gas nozzles for blowing away dissolved materials from the edge of the rectangular substrate to the outside while discharging a gas, and further, by forcing the solvent and gas nozzles to make linear movements relatively to the end edge of the rectangular substrate and along it.

CONSTITUTION: A first solvent nozzle for dissolving unnecessary thin films while discharging a solvent on the rear surface of the end edge of a rectangular substrate 1, and a first gas nozzle for blowing away dissolved materials from the end edge of the rectangular substrate 1 to the outside while discharging a gas are provided. On the other hand, on a supporting frame 24, a second solvent nozzle 26b for dissolving the unnecessary thin films while discharging the solvent on the surface of the end edge of the rectangular substrate 1 is provided. Also, on a supporting frame 25, a second gas nozzle 27b for blowing away the dissolved materials from the end edge of the rectangular substrate 1 to the outside while discharging the gas is provided. Further, a main body 18 of a cleaner is moved while making the attitude of the short side of the rectangular substrate 1 parallel with the moving direction of the main body 18, and thereby, the unnecessary thin films are removed while dissolving them.



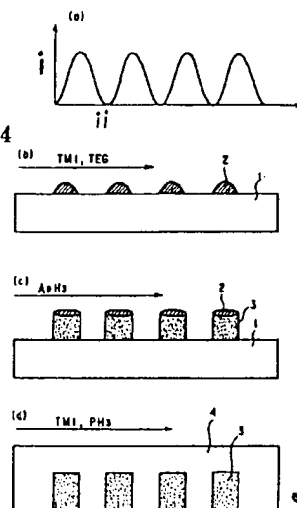
2: means for supporting substrate, 19: means for moving cleaner

(54) METHOD FOR CREATING COMPOUND SEMICONDUCTOR HAVING QUANTUM FINE LINE OR QUANTUM BOX STRUCTURE

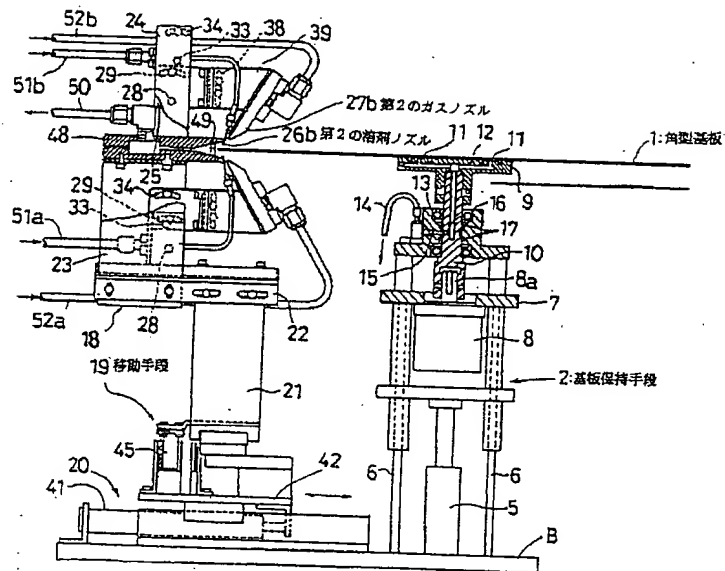
(11) 5-175118 (A) (43) 13.7.1993 (19) JP
 (21) Appl. No. 3-340901 (22) 24.12.1991
 (71) NIPPON TELEGR & TELEPH CORP <NTT>
 (72) MATSUYUKI OGASAWARA
 (51) Int. Cl.⁵. H01L21/20, C30B23/04, C30B25/04, H01L21/205, H01L21/263, H01L21/268, H01L29/04

PURPOSE: To obtain a steep surface by forming drops in the state wherein an interference pattern is formed, and by forcing a second compound semiconductor crystal to make an epitaxial growth on the substrate made of a first compound semiconductor crystal whereon the drop part exists, and thereafter, by making the first compound semiconductor crystal grow so that the second compound semiconductor crystals are embedded in it.

CONSTITUTION: On an InP substrate 1 mounted in a chamber for making a crystal grow, an optical interference pattern is formed. When feeding a raw material gas into the chamber in this state, InGa drops 2 are formed on the InP substrate 1. Then, arsine is fed into the chamber by switching the raw material gas to another one. Thereby, As generated by decomposing arsine is dissolved into the InGa drops formed in the last process, and when exceeding a solidly soluble limit, InGaAs crystals 3 are deposited on the interface between



【図2】



【図3】

